

Title (en)  
CERAMIC-COPPER COMPOSITE, CERAMIC CIRCUIT BOARD, POWER MODULE, AND METHOD FOR MANUFACTURING CERAMIC-COPPER COMPOSITE

Title (de)  
KERAMIK-KUPFERVERBUND, KERAMISCHE LEITERPLATTE, LEISTUNGSMODUL UND VERFAHREN ZUR HERSTELLUNG EINES KERAMIK-KUPFERVERBUNDES

Title (fr)  
COMPOSITE CÉRAMIQUE-CUIVRE, CARTE DE CIRCUITS IMPRIMÉS EN CÉRAMIQUE, MODULE DE PUISSANCE, ET PROCÉDÉ POUR FABRIQUER UN COMPOSITE CÉRAMIQUE-CUIVRE

Publication  
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Application  
**EP 19905496 A 20191226**

Priority  
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Abstract (en)  
[origin: EP3903980A1] A ceramic-copper composite having a flat plate shape, including: a ceramic layer; a copper layer; and a brazing material layer present between the ceramic layer and the copper layer, in which a specified Expression (1) is satisfied in a cut surface of the copper layer obtained when the ceramic-copper composite is cut at a plane perpendicular to a main surface of the ceramic-copper composite, where S(102)% is an area ratio occupied by copper crystals having a crystal orientation of which an inclination from a crystal orientation of (102) plane is within 10°, S(101)% is an area ratio occupied by copper crystals having a crystal orientation of which an inclination from a crystal orientation of (101) plane is within 10°, S(111)% is an area ratio occupied by copper crystals having a crystal orientation of which an inclination from a crystal orientation of (111) plane is within 10°, and S (112) % is an area ratio occupied by copper crystals having a crystal orientation of which an inclination from a crystal orientation of (112) plane is within 10°.

IPC 8 full level  
**B23K 1/00** (2006.01); **C04B 37/02** (2006.01); **H01L 23/12** (2006.01); **H01L 23/14** (2006.01); **H01L 23/15** (2006.01); **H05K 1/09** (2006.01); **B22F 1/05** (2022.01)

CPC (source: EP KR US)  
**B22F 7/04** (2013.01 - EP); **B23K 1/0016** (2013.01 - EP KR US); **B23K 1/19** (2013.01 - EP); **B23K 35/007** (2013.01 - EP); **B23K 35/0233** (2013.01 - EP); **B23K 35/0244** (2013.01 - EP); **B23K 35/025** (2013.01 - EP); **B23K 35/3006** (2013.01 - EP); **B23K 35/3601** (2013.01 - EP); **B23K 35/3613** (2013.01 - EP); **B23K 35/383** (2013.01 - EP); **B32B 3/30** (2013.01 - EP); **B32B 7/12** (2013.01 - EP); **B32B 9/005** (2013.01 - EP); **B32B 9/041** (2013.01 - EP); **B32B 15/20** (2013.01 - EP); **C04B 37/02** (2013.01 - KR); **C04B 37/023** (2013.01 - US); **C04B 37/026** (2013.01 - EP KR); **C22C 9/00** (2013.01 - EP); **H01L 23/12** (2013.01 - KR); **H01L 23/14** (2013.01 - KR); **H01L 23/15** (2013.01 - KR); **H01L 23/3735** (2013.01 - US); **H05K 1/0306** (2013.01 - US); **H05K 1/09** (2013.01 - KR US); **H05K 3/06** (2013.01 - US); **H05K 3/388** (2013.01 - EP); **B22F 1/05** (2022.01 - EP KR US); **B22F 9/082** (2013.01 - EP); **B23K 2101/36** (2018.07 - EP); **B23K 2101/42** (2018.07 - US); **B23K 2103/12** (2018.07 - EP US); **B23K 2103/18** (2018.07 - EP); **B23K 2103/52** (2018.07 - EP US); **B32B 2307/732** (2013.01 - EP); **B32B 2457/08** (2013.01 - EP); **C04B 2235/6567** (2013.01 - EP); **C04B 2235/6581** (2013.01 - EP); **C04B 2237/125** (2013.01 - EP KR US); **C04B 2237/343** (2013.01 - EP); **C04B 2237/348** (2013.01 - EP); **C04B 2237/365** (2013.01 - EP); **C04B 2237/366** (2013.01 - EP); **C04B 2237/368** (2013.01 - EP US); **C04B 2237/407** (2013.01 - EP KR US); **C04B 2237/52** (2013.01 - US); **H01L 23/15** (2013.01 - EP); **H05K 1/0306** (2013.01 - EP); **H05K 2201/0355** (2013.01 - US); **H05K 2203/1126** (2013.01 - US)

Citation (search report)  
• [A] JP 2017075382 A 20170420 - SH COPPER PRODUCTS CORP  
• [A] EP 3370488 A1 20180905 - DOWA METALTECH CO LTD [JP]  
• [A] WO 2018221493 A1 20181206 - DENKA COMPANY LTD [JP] & EP 3632879 A1 20200408 - DENKA COMPANY LTD [JP]  
• [A] JP 2016115821 A 20160623 - NGK ELECTRONICS DEVICES INC  
• See references of WO 2020138283A1

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